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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/054,328	01/21/2002	Alfred A. Margaryan		8109

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EXAMINER

BOLDEN, ELIZABETH A

ART UNIT

PAPER NUMBER

1755

DATE MAILED: 12/19/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

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# Office Action Summary

Application No.

10/054,328

Applicant(s)

MARGARYAN, ALFRED A.

Examiner

Elizabeth A. Bolden

Art Unit

1755

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 21 January 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) 13-15 and 27-29 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 and 16-26 is/are rejected.
- 7) ☒ Claim(s) 11 and 12 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6) ☐ Other:

**DETAILED ACTION**

***Election/Restrictions***

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-12 and 16-26, drawn to a glass composition, classified in class 501, subclass 48.
- II. Claims 13-15 and 27-29, drawn to a method of making a glass product, classified in class 65, subclass 32.5.

The inventions are distinct, each from the other because of the following reasons:

Inventions I and II are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the product as claimed can be made by a materially different process such as down drawing.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

During a telephone conversation with Dennis Beech on 12 December 2002 a provisional election was made without traverse to prosecute the invention of Group I, claims 1-12.

Affirmation of this election must be made by applicant in replying to this Office action. Claims 13-15 and 27-29 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

### *Specification*

The disclosure is objected to because of the following informalities: Typographical and formatting errors.

Throughout the specification and abstract chemical compositions have been recited without subscripts for example on page 1, line 9 of the specification has barium metaphosphate as “Ba(PO3)2” where it should be Ba(PO<sub>3</sub>)<sub>2</sub>. Chemical compositions should be formatted correctly.

The section heading “Brief Description of the Drawings” and paragraph 11 on page 3, lines 20-24 should be deleted.

On page 4, line 29 the word “matrice” should be corrected to matrix or matrices.

In paragraph [0020], on page 6 the specification refers to an example where MnO and Yb<sub>2</sub>O<sub>3</sub> are sensitizers, it is unclear to the examiner what example it is referring to.

### *Claim Objections*

Claims 1-3, 8-12, 16, 17, and 22-26 are objected to because of the following informalities: Typographical and formatting errors.

Claims 1-3, 8-12, 16, 17, and 22-26 recite chemical compositions without subscripts. For example in claim 1, a metaphosphate is “Ba(PO3)2” where it should be Ba(PO<sub>3</sub>)<sub>2</sub>. Chemical compositions should be formatted correctly.

Claim 2 appears to have a typographical graphical error in line 5. It appears that “RFn” should be “RFx”

In claim 9 in the 5<sup>th</sup> line “TO” should be in lowercase letters.

Claim 12 ends with an extra period.

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 2 and 22-26 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 2 is indefinite for failing to define R and n.

Claims 22-26 are indefinite for failing to specifically point out what is selected from the group recited as "CaF<sub>2</sub>, MgF<sub>2</sub>, PbF<sub>2</sub>, and BiF<sub>3</sub>".

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-10 and 16-24 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Tran, U.S. Patent 5,809,199.

Tran discloses a fluorophosphates glass comprising up to 25 mol% of Al<sub>2</sub>(PO<sub>3</sub>)<sub>3</sub>, Ba(PO<sub>3</sub>)<sub>2</sub>, Mg(PO<sub>3</sub>)<sub>2</sub>, and NaPO<sub>3</sub>, 20-45 mol% AlF<sub>3</sub>, 25-65 mol% RF<sub>2</sub> where R is an alkaline earth metal, up to 25 mol% LnF<sub>3</sub> where Ln is a lanthanide, and up to 15 mol% MF where M is an

alkali metal. See column 3, lines 34-57. These disclosed ranges are sufficiently specific to anticipate the limitations of claims 1-10 and 16-24. See MPEP 2131.03.

Claims 1-10 and 16-24 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Yamazaki et al., U.S. Patent 5,755,998.

Yamazaki et al. disclose a fluorophosphate glass comprising in mol%: 1-15 P, 1-18 Al, 0-12 Mg, 0-18 Ca, 1-21 Sr, 0-28 Ba, 0-3.5 Zn, 0.01-0.8 Eu, 0.2-4 Tb, 0-3 Sm, 0-1 Mn, 0-4Ln where Ln is at least one of Y, La, Gd, Yb, Lu, Dy, and Tm, 0-0.2 Ce, 0-3 R where R is Li, Na, and/or K, 4-55 O, 15-70 F, and 0-10 Cl. See column 3, lines 20-47. These disclosed ranges are sufficiently specific to anticipate the limitations of claims 1-10 and 16-24. See MPEP 2131.03.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-6, 8, 9, 16-20, and 22-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kodama, U.S. Patent 4,386,163.

Kodama teaches a fluorophosphates glass comprising 13-39 wt% of  $\text{Al}_2(\text{PO}_3)_3$ , 5-19 wt%  $\text{Ba}(\text{PO}_3)_2$ , 0-24 wt%  $\text{Mg}(\text{PO}_3)_2$ , 1-20 wt %  $\text{Ca}(\text{PO}_3)_2$ , 0-8 wt%  $\text{AlF}_3$ , 2-13 wt%  $\text{MgF}_2$ , 0-20

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wt%  $\text{SrF}_2$ , 1-33 wt%  $\text{BaF}_2$ , 0-8 wt%  $\text{YF}_3$ , 10-36 wt%  $\text{BaO}$ , 1.5-12 wt%  $\text{Y}_2\text{O}_3$  and/or  $\text{Yb}_2\text{O}_3$ , 0-6 wt%  $\text{ZnO}$ , 0-29 wt%  $\text{PbO}$ , 0-22  $\text{Nb}_2\text{O}_5$ . See abstract of Kodama.

The reference differs from the claims by defining the ranges on a weight percent basis rather than a molecular percent basis.

A theoretical composition in weight percent of 22 wt%  $\text{Al}_2(\text{PO}_3)_3$ , 19 wt%  $\text{Ba}(\text{PO}_3)_2$ , 1 wt%  $\text{Ca}(\text{PO}_3)_2$ , 2 wt%  $\text{MgF}_2$ , 6 wt%  $\text{SrF}_2$ , 30 wt%  $\text{BaF}_2$ , 10 wt%  $\text{BaO}$ , 5 wt%  $\text{Y}_2\text{O}_3$ , and 5 wt%  $\text{Yb}_2\text{O}_3$  is equivalent to the composition in terms of molecular percent of 16.6 mol%  $\text{Al}_2(\text{PO}_3)_3$ , 12.8 mol%  $\text{Ba}(\text{PO}_3)_2$ , 1 mol%  $\text{Ca}(\text{PO}_3)_2$ , 6.4 mol%  $\text{MgF}_2$ , 9.5 mol%  $\text{SrF}_2$ , 34 mol%  $\text{BaF}_2$ , 12.9 mol%  $\text{BaO}$ , 4.4 mol%  $\text{Y}_2\text{O}_3$ , and 2.5 mol%  $\text{Yb}_2\text{O}_3$ .

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have a fluorophosphates glass of Kodama because a composition, which is encompassed in the ranges of Kodama, is also included in the ranges of the instant invention.

#### ***Allowable Subject Matter***

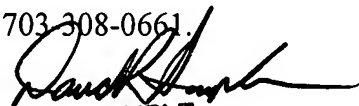
Claims 11, 12, 25, and 26 are allowed. The prior art fail to disclose or suggest a barium fluorophosphates glass comprising 10 mol%  $\text{Ba}(\text{PO}_3)_2$ , 18 mol%  $\text{Al}(\text{PO}_3)_3$ , 70 mol%  $\text{BaF}_2$ , and 2 mol% either  $\text{Nd}_2\text{O}_3$  or  $\text{Er}_2\text{O}_3$  nor 10 mol%  $\text{Ba}(\text{PO}_3)_2$ , 18 mol%  $\text{Al}(\text{PO}_3)_3$ , 90 mol%  $\text{BaF}_2$ , and a dopant of either 5 mol%  $\text{Nd}_2\text{O}_3$  or 10 mol%  $\text{Er}_2\text{O}_3$ . The above noted objections should be corrected prior to allowance.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elizabeth A. Bolden whose telephone number is 703-305-0124. The examiner can normally be reached on 8:30am to 6:00 pm with alternating Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark L. Bell can be reached on 703-308-3823. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

  
**DAVID SAMPLE**  
**PRIMARY EXAMINER**

EAB  
December 13, 2002